

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problems Mailbox.**

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE
in its capacity as elected Office

Date of mailing (day/month/year) 03 July 2001 (03.07.01)	
International application No. PCT/NO00/00333	Applicant's or agent's file reference P1316PC00
International filing date (day/month/year) 09 October 2000 (09.10.00)	Priority date (day/month/year) 08 October 1999 (08.10.99)
Applicant EDLAND, Jone	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
07 May 2001 (07.05.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Charlotte ENGER Telephone No.: (41-22) 338.83.38
---	---

PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

To:

VEDDE, Toril
Onsagers AS
P.O. Box 265 Sentrum
N-0103 Oslo
NORVÈGE

Date of mailing (day/month/year) 22 April 2002 (22.04.02)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference Edl 1 114013/tv	
International application No. PCT/NO00/00333	International filing date (day/month/year) 09 October 2000 (09.10.00)

1. The following indications appeared on record concerning: <input type="checkbox"/> the applicant <input type="checkbox"/> the inventor <input checked="" type="checkbox"/> the agent <input type="checkbox"/> the common representative		
Name and Address PROTECTOR INTELLECTUAL PROPERTY CONSULTANTS AS P.O. Box 5074 Majorstua N-0301 Oslo Norway	State of Nationality	State of Residence
	Telephone No. +47-22957440	
	Facsimile No. +47-22957450	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning: <input checked="" type="checkbox"/> the person <input checked="" type="checkbox"/> the name <input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence		
Name and Address VEDDE, Toril Onsagers AS P.O. Box 265 Sentrum N-0103 Oslo Norway	State of Nationality	State of Residence
	Telephone No. (+47) 2332-7700	
	Facsimile No. (+47) 2332-7701	
	Teleprinter No.	
3. Further observations, if necessary: Please note that the agent's file reference has been changed accordingly.		
4. A copy of this notification has been sent to: <input checked="" type="checkbox"/> the receiving Office <input type="checkbox"/> the designated Offices concerned <input type="checkbox"/> the International Searching Authority <input checked="" type="checkbox"/> the elected Offices concerned <input type="checkbox"/> the International Preliminary Examining Authority <input checked="" type="checkbox"/> other: PROTECTOR INTELLECTUAL PROPERTY		

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer François BAECHLER Telephone No.: (41-22) 338.83.38
---	---

**(19) World Intellectual Property Organization
International Bureau**



(43) International Publication Date
19 April 2001 (19.04.2001)

PCT

(10) International Publication Number
WO 01/27479 A1

(51) International Patent Classification⁷: F16B 23/00

(21) International Application Number: PCT/NO00/00333

(22) International Filing Date: 9 October 2000 (09.10.2000)

(25) Filing Language: English

(26) **Publication Language:** English

(30) Priority Data: 19994934 8 October 1999 (08.10.1999) NO

(71) Applicant and

(72) Inventor: EDLAND, Jone [NO/NO]; Ekraveien 65C,
N-0756 Oslo (NO).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

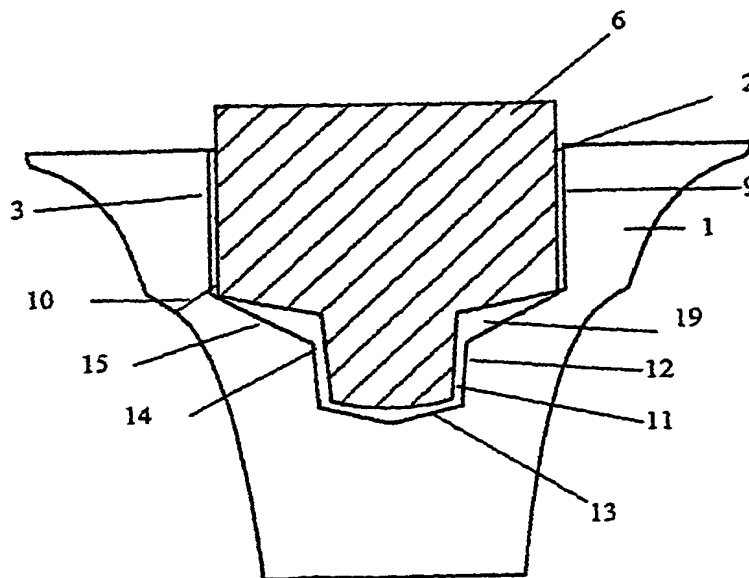
Published:

— *With international search report.*

(74) Agent: PROTECTOR INTELLECTUAL PROPERTY
CONSULTANTS AS; P.O. Box 5074 Majorstua, N-0301
Oslo (NO).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM COMPRISING A SCREW AND A TOOL THEREFOR



(57) **Abstract:** System comprising a screw and a tool (6) therefor, in which the screw has a screw head (1) with a slot (2), the slot (2) having a first recess (3) with an approximately straight-walled cross section, and the tool being provided with an engagement section (16) that is complementary to the first recess (3). The slot has a second recess (11) at the bottom of the first recess (3), with a smaller diameter than that of the first recess (3), and the tool (6) is provided with a central point (17) that complements the second recess (11). The second recess (11) has a circular cross section and the central point (17) of the tool (6) has a circular cross section.

WO 01/27479 A1

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO 00/00333

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: F16B 23/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: F16B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1039151 A1 (TOTSU, KATSUYUKI), 27 Sept 2000 (27.09.00), column 8, line 7 - line 15, figures 10, 11,12	1,3,4,6,7,9
A	--	2,5,8
X	US 6017177 A (LANHAM), 25 January 2000 (25.01.00), column 3, line 22 - line 27; column 3, line 43 - line 44, figures 13,25	1,3,4,6,7,9
A	--	2,5,8

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

8 January 2001

22-01-2001

Name and mailing address of the ISA/

Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

Marita Öun / JA A

Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO 00/00333

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3273442 A (P, LAUNAY), 20 Sept 1966 (20.09.66), figures 1,10	1,4,7
A	--	2,3,5,6,8,9
X	US 4258596 A (BISHING ET AL), 31 March 1981 (31.03.81), column 3, line 8 - line 13, figures 2, 3	1,4,7
A	--	2,3,5,6,8,9
X	GB 2261483 A (VALERIE HULBERT), 19 May 1993 (19.05.93), figure 5	4
A	-- -----	1-3,5-9

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/NO 00/00333

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
EP	1039151	A1	27/09/00	AU	1505199 A	28/06/99
				BR	9813486 A	17/10/00
				JP	995512 C	30/04/80
				JP	52022682 A	21/02/77
				JP	54032916 B	17/10/79
				JP	11173315 A	29/06/99
				WO	9930046 A	17/06/99

US	6017177	A	25/01/00	DE	19836572 A	08/04/99

US	3273442	A	20/09/66	CH	385563 A	00/00/00
				DE	1675656 B	23/04/70
				GB	955044 A	00/00/00
				NL	276619 A	00/00/00

US	4258596	A	31/03/81	NONE		

GB	2261483	A	19/05/93	GB	9123972 D	00/00/00

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Registrert i Patricia

21 JAN 2002

O.nr. P1316PC00 Sign.: KLC

Applicant's or agent's file reference P1316PC00/AT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/NO00/00333	International filing date (day/month/year) 09.10.2000	Priority date (day/month/year) 08.10.1999
International Patent Classification (IPC) or national classification and IPC ₇ F16B 23/00		
Applicant Edland, Jone		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 07.05.2001	Date of completion of this report 11.01.2002
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 89	Authorized officer Per-Olof Warnbo / JA A Telephone No. 08-7821 25 00

02 APR 2002

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/NO00/00333

I. Basis of the report

1. With regard to the elements of the international application:**

☐ the international application as originally filed☒ the description:pages 1-6, as originally filed

pages _____, filed with the demand

pages 2A, filed with the letter of 05.11.2001☒ the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement) under article 19

pages _____, filed with the demand

pages 7-8, filed with the letter of 05.11.2001☒ the drawings:pages 1-2, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☐ The amendments have resulted in the cancellation of:☐ the description, pages _____☐ the claims, Nos. _____☐ the drawings, sheet/fig _____5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/NO00/00333

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-9</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-9</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-9</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Cited documents:

1. EP 1039151 A1 (Totsu, Katsuyuki)
2. US 6017177 A (Lanham)
3. US 3273442 A (P. Launay)
4. US 4258596 A (Bishing et al)
5. GB 2261483 A (Valerie Hulbert)

The documents cited in the International Search Report represent background art.

The invention defined in claims 1-9 is not disclosed by any of these documents.

None of the cited documents gives any indication towards the claimed system comprising a screw and a tool , screw and screw tool. No relevant combination of the cited documents would lead a person skilled in the art to the invention defined in the claims.

Therefore, the invention defined in claims 1-9 is novel and is considered to involve an inventive step. It is also considered to be industrially applicable.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/NO00/00333

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Note that the word "system" in claim 6 must be changed to "screw".

The Swedish Patent Office

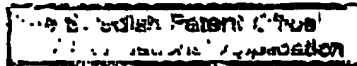
2a

PCT/NO01/00333

05-11-2001

EP 1039151 shows a TORX-screw with corresponding tool. The screw has an ordinary TORX slot and a circular recess below this. This recess has the same diameter as the internal diameter of the TORX slot. The recess is very shallow. Even though it is said to prevent the screw from falling off the tool, this shallow recess have in fact very little effect. The screw shown has a cylindrical head. If the head was conical, the depth of the recess would have to be further reduced or the depth of the slot would have to be reduced. In any case it would be difficult to make the recess any deeper than shown, since the diameter is so large.

US 6017177 shows a screw with a TORX slot. several embodiments are shown. However, the TORX slot is situated at the bottom of a cavity. Below the TORX slot there is a recess. If the screw head had been conical very little room had been left for the recess. Consequently, this type of screw is limited to cylindrical heads only.



JC13 Rec'd PCT/PTO 02 APR 2002

PCT/NO01/00333

05-11-2001

New Patent Claims

Attorney ref: P1316PC00

Appl. No.: PCT/NO00/00333

1.

- 5 System comprising a screw and a tool (6) therefor, in which the screw has a screw head (1) with a top surface and a slot (2), the slot (2) having a first recess (3) adjoining the top surface, the slot (2) having an approximately straight-walled cross section, and the tool is provided with an engagement section (16) that is complimentary to the first recess (3), and where the slot has a second recess (11) at the bottom of the first recess (3), with a smaller diameter than
- 10 that of the first recess (3), and the tool (6) is provided with a central point (17) that complements the second recess (11), the recess (3) is shaped as a star with six points viewed in the axial direction of the screw, in accordance with the Torx® standard (e.g. ISO 10664), the second recess (11) has a circular cross section, and the central point (17) of the tool (6) has a circular cross section, w h e r e i n the screw comprises a transition surface
- 15 (15) between the first (3) and second (11) recess, which extends to the second recess at a first angle, and the tool (6) comprises a surface (18) between the engagement section (16) and the central point (17), which extends to the central point (17) at a second angle, the first angle being steeper than the second angle, so that a space (19) is formed between the transition surface (15) and the surface (18) when the tool (6) is inserted into the slot (2), the space (19)
- 20 diverging towards the central point (17).

2.

System according to Claim 1, w h e r e i n the diameter of the second recess (11) is substantially smaller than the diameter of the first recess (3).

25

3.

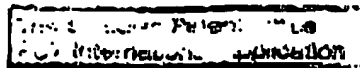
System according to Claim 1 or 2, w h e r e i n the first recess (3) and the second recess (11) have substantially the same depth.

30

4.

Screw constituting part of a system comprising the screw and a tool therefor, in which the screw has a screw head (1) with a top surface and a slot (2), the slot (2) having a first recess (3) adjoining the top surface, the slot (2) having an approximately straight-walled cross section, and in which the slot has a second recess (11) at the bottom of the first recess (3),

REC'D PCT/PTO 02 APR 2002



8

PCT/NO 01/00333

05-11-2001

with a smaller diameter than that of the first recess (3), the recess (3) is shaped as a star with six points viewed in the axial direction of the screw, in accordance with the Torx® standard (e.g. ISO 10664), and the second recess (11) has a circular cross section, w h e r e i n the screw comprises a transition surface (15) between the first (3) and second (11) recess, which extends to the second recess (11) at an angle.

5.

Screw according to Claim 4, w h e r e i n the diameter of the second recess (11) is substantially smaller than the diameter of the first recess (3).

6.
Screw

System according to Claim 4 or 5, w h e r e i n the first recess (3) and the second recess (11) have substantially the same depth.

7.

Screw tool constituting part of a system comprising the tool and a screw, the tool is provided with an engagement section (16) and a central point (17), the engagement section (16) of the tool is shaped as a star with six points with substantially parallel walls, in accordance with the Torx® standard (e.g. ISO 10664), and the central point (17) has a circular cross section, w h e r e i n the tool comprises a surface (18) between the engagement section (16) and the central point (17), which extends to the central point (17) at an angle.

8.

Screw tool according to Claim 7, w h e r e i n the central point (17) has a substantially smaller diameter than the engagement section (16).

9.

Screw tool according to Claim 7 or 8, w h e r e i n the central point (17) and the engagement section (16) have substantially the same length.